

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A print control apparatus for use in a printer that prints,
using-controlling a printer engine, that prints a content-based on a file indicating the content to be
printed based on information indicating the content, said print control apparatus obtaining and
processing the information and causing the printer engine of the printer to print the content, said
print control apparatus comprising:

an obtainment unit operable to obtain print data including the information indicating the
content to be printed, the print data being obtained from outside said print control apparatus;

a division unit operable to divide the print data obtained by said obtainment unit into
files;

a storage unit in which the files are stored that has an area for storing the file;

a writing unit operable to write the files-file in said storage unit; and

a file management unit operable to manage the-hierarchize files-to-be written by said
writing unit in said storage unit, the files written in said storage unit being managed using a
hierarchy having at least three hierarchical layers, operable to manage files in a hierarchical form,
and operable to search the hierarchy for the files file based on a resulting hierarchy,

wherein said file management unit is operable to selectively use, depending on the print
data obtained by said obtainment unit, (i) a first management form for managing the files using
hierarchical layers in the hierarchy, and (ii) a second management form for managing the files
using hierarchical layers in the hierarchy, the hierarchical layers managed by the second
management form being different from the hierarchical layers managed by the first management

form,

wherein the first management form is a management form for managing the files written in said storage unit, the first management form managing the files using two hierarchical layers by setting, for each print data, a storage area in said storage unit, and causing the writing unit to write the files generated from the respective print data into the storage area, and

wherein the second management form is a management form for managing the files written in said storage unit, the second management form managing the files using three hierarchical layers, the managing using the second management form being performed by setting (i) a storage area in said storage unit for each print data, and (ii) sub-storage areas in the storage area, and by causing said writing unit to write each of the files generated from the respective print data into a corresponding sub-storage area of the sub-storage areas in the storage area.

Claim 2 (Cancelled)

Claim 3 (Currently Amended) The print control apparatus according to Claim 1-~~Claim 2~~,
wherein said division unit is operable to divide the print data on a page-by-page basis and operable to generate a file including information equivalent to each page.

Claim 4 (Currently Amended) The print control apparatus according to Claim 1-~~Claim 2~~,
wherein said division unit is operable to divide the print data on an area-by-area basis, the area being smaller than a page, and operable to generate a file including information equivalent

to each page.

Claim 5 (Cancelled)

Claim 6 (Cancelled)

Claim 7 (Currently Amended) The print control apparatus according to Claim 1-Claim 2,
wherein said file management unit is operable to set an upper limit of a-on the number of
print data to be written in said storage unit as the files and operable to prohibit said writing unit
from writing an amount of print data that is over the upper limit.

Claim 8 (Cancelled)

Claim 9 (Currently Amended) The print control apparatus according to Claim 1-Claim 8,
wherein said file management unit is operable to selectively use the first management
form and the second management form depending on a-the number of files comprising-
composing the print data obtained by said obtainment unit.

Claim 10 (Cancelled)

Claim 11 (Currently Amended) The print control apparatus according to Claim 1-Claim 2,

wherein said file management unit is operable to set, in said storage unit, a storage area in which a number of files under a predetermined upper limit are written, and

wherein said file management unit is operable to newly set the storage area, and operable to cause said writing unit to write the said files in the new storage area when the ~~in the case~~ ~~where the~~ number of files written in the storage area reaches the upper limit.

Claim 12 (Cancelled)

Claim 13 (Currently Amended) A print control method for use in controlling a printer that prints, using a printer engine, that prints a content to be printed based on information indicating the content, said print control method being for obtaining and processing the information causing the printer engine of the printer to print the content, said print control method based on a file indicating the content to be printed, comprising:

an obtainment step of obtaining print data including the information indicating the content to be printed;

a division step of dividing the print data obtained in said obtainment step into files;

a writing step of writing the files in a memory;

a hierarchization step of hierarchizing files, one of which being the file, and writing files in a memory; and

a file management step of managing the files written in the memory, the files written in the memory being managed using a hierarchy having at least three hierarchical layers; and

a search step of searching the hierarchy for the files ~~file based on a resulting hierarchy,~~
wherein, in said file management step, a first management form for managing the files
using hierarchical layers in the hierarchy, and a second management form for managing the files
using hierarchical layers in the hierarchy are selectively used depending on the print data
obtained in said obtainment step, the hierarchical layers managed by the second management
form being different from the hierarchical layers managed by the first management form,
wherein the first management form is a management form for managing the files written
in the memory, the first management form managing the files using two hierarchical layers by
setting, for each print data, a storage area in the memory, and causing said writing step to write
the files generated from the respective print data into the storage area, and
wherein the second management form is a management form for managing the files
written in the memory, the second management form managing the files using three hierarchical
layers, the managing using the second management form being performed by setting (i) a storage
area in the memory for each print data, and (ii) sub-storage areas in the storage area, and by
writing each of the files generated from the respective print data into a corresponding sub-storage
area of the sub-storage areas in the storage area.

Claim 14 (Cancelled)

Claim 15 (Currently Amended) The print control method according to Claim 13 ~~Claim 14~~,
wherein, in said division step, the print data is divided on a page-by-page basis and a file

including information equivalent to each page is generated.

Claim 16 (Cancelled)

Claim 17 (Cancelled)

Claim 18 (Currently Amended) The print control method according to Claim 13-Claim 14, wherein, in said management-hierarchization step, an upper limit of ~~a-on-the~~ number of print data to be written in the memory as files is set and writing print data over the upper limit is prohibited.

Claim 19 (Currently Amended) The print control method according to Claim 13-Claim 14, wherein, in said management-hierarchization step, a storage area, in which a number of files under a predetermined upper limit are written, is set in the memory, and when the ~~in the case~~ ~~where the~~ number of files written in the storage area reaches the upper limit, the storage area is newly set and writing in the new storage area is performed.

Claim 20 (Currently Amended) A program recorded on a computer-readable recording medium, the program for use in a printer which prints, using a printer engine, a content to be printed based on information indicating the content, the program being for obtaining and processing the information and causing the printer engine of the printer to print the content ~~for~~

controlling a printer engine that prints a content based on a file indicating the content to be printed, the program causing a computer to execute a method comprising:

an obtainment step of obtaining print data including the information indicating the content to be printed;

a division step of dividing the print data obtained in said obtainment step into files;

a writing step of writing the files in a memory;

a hierarchization step of hierarchizing files, one of which being the file, and writing the files in a memory; and

a file management step of managing the files written in the memory, the files written in the memory being managed using a hierarchy having at least three hierarchical layers; and

a search step of searching the hierarchy for the files file based on a resulting hierarchy, wherein, in said file management step, a first management form for managing the files using hierarchical layers in the hierarchy, and a second management form for managing the files using hierarchical layers in the hierarchy are selectively used depending on the print data obtained in said obtainment step, the hierarchical layers managed by the second management form being different from the hierarchical layers managed by the first management form,

wherein the first management form is a management form for managing the files written in the memory, the first management form managing the files using two hierarchical layers by setting, for each print data, a storage area in the memory, and causing said writing step to write the files generated from the respective print data into the storage area, and

wherein the second management form is a management form for managing the files

written in the memory, the second management form managing the files using three hierarchical layers, the managing using the second management form being performed by setting (i) a storage area in the memory for each print data, and (ii) sub-storage areas in the storage area, and by writing each of the files generated from the respective print data into a corresponding sub-storage area of the sub-storage areas in the storage area.

Claim 21 (Cancelled)

Claim 22 (Currently Amended) The computer-readable recording medium program-
according to Claim 20-Claim 21,

wherein, in said division step,

the print data is divided on a page-by-page basis and a file including information
equivalent to each page is generated.

Claim 23 (Cancelled)

Claim 24 (Cancelled)

Claim 25 (Currently Amended) A printer comprising:

a printer engine for printing a content based on a file indicating the content to be printed;
and

a print control apparatus for obtaining and processing information and causing said printer engine to print the content ~~controlling the printer engine,~~

wherein said print control apparatus includes:

an obtainment unit operable to obtain print data including the information indicating the content to be printed, the print data being obtained from outside said print control apparatus;

a division unit operable to divide the print data obtained by said obtainment unit into files;

a storage unit in which the files are stored that has an area for storing the file;

a writing unit operable to write the ~~files~~ file in said storage unit; and

a file management unit operable to ~~manage the hierarchize files to be written by said writing unit~~ in said storage unit, the files written in said storage unit being managed using a hierarchy having at least three hierarchical layers by said writing unit and operable to manage the files in a hierarchical form, and operable to search the file based on a resulting hierarchy for the files,

wherein said file management unit is operable to selectively use, depending on the print data obtained by said obtainment unit, (i) a first management form for managing the files using hierarchical layers in the hierarchy, and (ii) a second management form for managing the files using hierarchical layers in the hierarchy, the hierarchical layers managed by the second management form being different from the hierarchical layers managed by the first management form,

wherein the first management form is a management form for managing the files written in said storage unit, the first management form managing the files using two hierarchical layers by setting, for each print data, a storage area in said storage unit, and causing the writing unit to write the files generated from the respective print data into the storage area, and

wherein the second management form is a management form for managing the files written in said storage unit, the second management form managing the files using three hierarchical layers, the managing using the second management form being performed by setting (i) a storage area in said storage unit for each print data, and (ii) sub-storage areas in the storage area, and by causing said writing unit to write each of the files generated from the respective print data into a corresponding sub-storage area of the sub-storage areas in the storage area.

Claim 26 (Cancelled)

Claim 27 (Currently Amended) The printer according to Claim 25-Claim 26,

wherein said division unit is operable to divide the print data on a page-by-page basis and operable to generate a file including information equivalent to each page.

Claim 28 (Cancelled)

Claim 29 (Cancelled)